



STAN-TONE™ SPECIALTY COLORANTS

FACT SHEET



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PolyOne offers one of the industry's best-known color additive brands. Stan-Tone™ Color is widely used in the rubber and plastics industries, and comes in a wide range of stock and customizable colors. Products are available in multiple product forms and types for use in your manufacturing environment. These colorants can be selected to meet any or all of the following characteristics: indoor or outdoor lightfastness; chemical resistance; heat stability – time and temperature parameters; ease of dispersion; toxicity – toy, medical, food, cosmetic, etc.; optimum economics; heavy-metal free replacement.

PRODUCT	FORM	DESCRIPTION
Stan-Tone™ D and DC Dry Colors*	Free-flowing dry powder	Pigments are available in a wide range of color hues and chemical types. Dry color offers the lowest raw material cost but requires additional work to achieve dispersion for maximum color development. Precautions must be taken to minimize the potential problems associated with airborne dust.
Stan-Tone™ DB Dry Blend Colors	Powder or wetted powder	Provide enhanced performance over dry colors. Can be oil-treated to reduce dust, DB colors are easier to weigh and cleaner to handle. Available in multipigment blends, they provide uniform critical pigment weight ratios, resulting in improved color control. Additional benefits include reduction in airborne dust and reduction in loss of product during mixing.
Stan-Tone™ HCC Vinyl Paste Dispersions	Varying viscosity, liquid to paste	HCC series consists of selected pigments dispersed in diisodecyl phthalate plasticizer (DIDP) and are designed for applications in which dispersion, uniformity, compatibility and cleanliness are essential characteristics. Available in liquid to paste form with varying viscosities, the HCC series also provides optimum color control for metering and distribution, and are available in custom plasticizers. Stan-Tone™ HCC colorants are best for processes such as dipping, rotocast and slush molding for applications including coated fabrics, vinyl sealants, adhesives, wall coverings, toys, footwear, sporting goods, silk screen, etc.
Stan-Tone™ SP Silicone Dispersions	Varying viscosity, liquid to paste	Can be used in thermoset gum rubber, one- and two-component RTV systems, and two-part LIM systems. Selection of a colorant must be made to meet the individual requirements of a specific type. <p>RTV System</p> RTVs are most commonly used for sealants and caulks. There are two types: one-component moisture-cured systems and two-component systems. Stan-Tone™ SP (silicone paste) colors offer a standard line of single pigments dispersed in a low-viscosity dimethyl fluid. They can be modified to varying viscosities from pourable fluid to thick putty. The SP line can be provided as custom-blended, multipigment colors. Because the RTVs cure at room temperature, the selection of suitable pigments is much greater, giving the compounder more flexibility.
Stan-Tone™ FSP FDA Silicone Dispersions	Varying viscosity, liquid to paste	To supplement our Stan-Tone™ SP (silicone paste) line, we have developed a palette of 13 silicone paste colors using ingredients regulated under FDA CFR Title 21. Title 21 offers the formulator a good guideline for colorant selection that will meet the requirements for various food and skin contact applications, but the burden of proof lies with the manufacturer of the finished product. Thus, it is very important to test the performance of the colorant in the actual compound being used. These colorants, dispersed in a dimethyl silicone fluid, are formulated at optimum pigment loading, resulting in a paste consistency.

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Stan-Tone™ SMB Silicone Masterbatch Dispersions	Cuttible masterbatches or slabs	A polydimethyl silicone elastomer gum binder resulting in cuttable masterbatches or slabs for ease of handling, especially for 2-roll, open-mill mixing. Applications include mechanical seals, keypads, gaskets, wire & cable, air bags, etc. Thermoset gums are used for a variety of applications, typically using conventional fabrication methods, such as compression, injection, extrusion and transfer molding. The cure time and temperature, post-cure and end-use requirements are all factors in selection of pigments. A wide range of high-temperature organic and inorganic pigments are available.
Stan-Tone™ EPX Epoxy Dispersions	Varying viscosity, liquid to paste	EPX series for epoxy systems consists of selected pigments dispersed in a Bisphenol A undiluted epoxy resin with an epoxide equivalent of 185. These colorants contain high pigment loading for optimum economics but can be diluted by the user if a lower viscosity is desired. Stan-Tone™ EPX dispersions are intended for use in a variety of thermoset epoxy systems. Typical applications include protective coatings, adhesives, epoxy flooring, electrical potting, laminates and decorative jewelry. Selection of the best pigment(s) to meet the requirements of a particular application is based on heat stability, lightfastness, weatherability, toxicity and other factors. EPX colors should be premixed into the epoxy resin prior to adding the curative.
Stan-Tone™ ET and PEP Dispersions for Castable Polyurethanes	Varying viscosity, liquid to paste	Whatever the use, the vehicle must be compatible with the particular urethane system. For our purposes, urethane systems can be categorized into two basic types: polyethers and polyesters. These vehicle types fall into the categories of nonreactive and reactive. Most urethane systems are based on two components, typically a “prepolymer” and “polyol.” The nonreactive vehicles can be added to either component with minimum concern. However, the reactive vehicles should be mixed with the polyol portion. Mixing reactive vehicles with the prepolymer should be carefully evaluated and tested on an application-by-application basis, because it could result in shortened pot life and/or inferior physical properties. Stan-Tone™ dispersions also are available in a variety of other vehicles, including dipropylene glycol dibenzoate, which has an advantage of compatibility in both polyether and polyester systems. Customer-specified carrier systems and custom color-match pigment blends are available.
Stan-Tone™ ET Polyether Dispersions	Varying viscosity, liquid to paste	Pigments are dispersed in a urethane polyol – polyether triol, molecular weight 3,000, hydroxyl number 56. These Stan-Tone™ ET dispersions find broad applications in thermoset polyurethane polyether-based systems including flexible foam, castable rolls and wheels, adhesives, laminates, etc.
Stan-Tone™ PEP Polyester Dispersions	Varying viscosity, liquid to paste	Pigments are dispersed in a polyester plasticizer – diethylene glycol adipate, molecular weight 2,000, hydroxyl number 54. Stan-Tone™ PEP dispersions are intended for use in a variety of thermoset polyester systems that include urethanes and polyester fiberglass composites. Typical applications include cast urethane wheels, industrial rollers, rigid foams, adhesives and laminates, etc.
Stan-Tone™ VC and VCP Vinyl Dispersions	Pellet (VC) or powder (VCP)	Vinyl colorants are best for applications in which dispersion, uniformity, compatibility and cleanliness are essential characteristics. Both provide optimum color control for metering and distribution. Stan-Tone™ VC/VCP products are based on single pigment or multipigment blends and can be formulated to be used in flexible or rigid vinyl compounds. Typical use levels range from 1% to 5% in a vinyl compound. In general, for optimum handling and mixing performance, the colorant form should be similar to that of the vinyl base compound to which it is being added.
Stan-Tone™ WDN Water Dispersions	Liquid	Water dispersions are high-solids, organic or inorganic single-pigment dispersions. They are produced to provide a consistent color value and tint strength. Components include pigments, alkali-stabilized acrylic resin, water and a small amount of nonmetallic preservative, with no wetting agents, surfactants or glycol. All Stan-Tone™ WDNs are carefully controlled to meet standards for dispersion, pH, solids, strength and shade. Custom blending is available on minimum batch sizes of 500 gallons. Stan-Tone™ WDNs were developed to eliminate/minimize settling. However, light stirring is always recommended. Stan-Tone™ WDNs will freeze. Care should be taken to ensure that these products are protected from freezing and stored at temperatures reliably above 32°F (0°C). Typical applications include dipped latex balloons and gloves, coatings and adhesive systems.





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Stan-Tone™ colorants are manufactured at PolyOne's state-of-the-art facility located in Massillon, Ohio. For more information, call 1-866-POLYONE or e-mail us via our Web site at www.polyone.com.

* **Stan-Tone™ D** and **DC Dry Colors** are distributed exclusively by *Excel Polymers*.



At PolyOne, we deliver premium-quality products and services, which our customers use to enhance their own products. We believe no competitor can match our technical expertise because no workforce can outperform the people of PolyOne. Our people are ONE team working together – our strength and our pride. Their skills, passion and dedication are shaping a potent industry leader, a concerned corporate citizen and a great place to work.

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